ABSTRACT

This study applies the cultural fit perspective to examine effectiveness of quality management practices. It reviews the literatures on quality management practices and organizational culture, particularly the competing values framework. Eight propositions have been articulated with respect to how QM practices fit organizational cultural characteristics and how the good fit can achieve positive outcomes. Their implications for theory and practice have been discussed in the paper.

KEYWORDS: Quality management, Organizational culture, Cultural fit, Competing values framework, Developmental culture

INTRODUCTION

Quality management (QM) is vital to firm performance and profitability. A series of QM methods have been developed over the past decades. Both positive and negative effects of these QM methods were reported in the literature (for a few examples, see Goldman, 2005; Sunder, 2013; Zu, 2009). While other possible solutions were offered, building a quality culture to promote the positive effects and prevent the negative ones seems to gain ground as a viable solution, as it has been consistently recommended in the literature (Davis, Mahanna, Joly, Zelek, Riley, & Verma, 2013; Davison & Al-Shagha, 2007; Handfield & Ghosh, 1994; Katiliute & Neverauskas, 2009; Maurer, 2013). This solution suggests that a quality culture can be established or imported. However, such a prescriptive view of culture seems to deviate from core assumptions of organizational culture inherent in most organizational culture perspectives (Martin, 1992; O’Reilly & Chatman, 1996; Schein, 1992; Trice & Beyer, 1993). Most culture theories hold that culture emerges in organizations, although they acknowledge instrumental roles of other factors such as personality of founding CEOs, national culture, organizational structure, and institution in the development of organizational culture. From an emergent point of view, organizational culture already exists in an organization that has some history. Because of this, organizational culture shapes organizational processes and practices (Schein, 1992, Martin, 1992). Thus, we argue that if an organizational practice is, in many ways, compatible with the core values of the organizational culture, it will be effective.

Similarly, our argument is extended that in the field of QM, if a certain QM practice fits into the organizational culture, it is assumed to be effective. Yet, prior studies on the relationship between organizational culture were mostly concerned in uncovering what positive roles
organizational culture can play in quality management (Kuo & Kuo, 2010; Jenkins et al., 2008; Naor, Goldstein, Linderman, & Schroeder, 2008). These studies did not offer insight into what organizational culture facilitates what specific QM practice. Such needed knowledge should be helpful to management, as it informs management what specific QM practice would fit their organizational culture. This motivates the current study. Thus, its purpose is to explore a QM practice-organizational culture fit perspective and propose how to match QM practices with types of organizational culture. The remaining part of this paper is organized as follows: First we will review the literature regarding QM practices and organizational culture, then the Competing Values Framework will be introduced, finally, we will articulate some propositions on how to match QM practices with organizational culture.

LITERATURE REVIEW

Scholarly attention to the notion of fit started in psychology and organizational behavior (Nadler & Tushman, 1980). In studying, for example, person-situation fit, organizational behavior researchers have explored the match or congruence between individual characteristics, usually personality traits, and broad occupational attributes, the relationship between individual skills and job requirements, and how the match or mismatch, and the relationship impact job performance (O’Reilly, Chatman, & Caldwell, 1991). This notion of fit has been applied to other interaction contexts such as person-organization (e.g., Joyce & Slocum, 1984), person-environment (Muchinsky & Monahan, 1987), and person-culture fit (O’Reilly et al., 1991). According to Schneider (2001), the fit perspective has become a dominant conceptual framework in academic research. The blossom of published studies using this framework shows that good fit or congruence leads to positive outcomes for both the individual person and the environment or organization, thus confirming the importance of fit (Cable & Judge, 1997). More importantly, it has been widely accepted that culture is central to the fit perspective (Chuang, Wang, & Judge, 2015). O’Reilly et al. (1991) argued that the concept of cultural fit pervades most fit contexts. Because of this, the relevance of the cultural fit phenomenon has been extended to other areas such as entrepreneurship (Rozell et al., ), merger and acquisition (Bauer & Matzler, 2014), and quality management (Canato, Ravasi, & Phillips, 2013). Consistent with the entire fit perspective, the concept of cultural fit emphasizes that a business practice’s good fit, congruence, or compatibility with the predominant values, beliefs, and norms inherent in the organizational culture leads to positive outcomes (Chatterjee et al., 1992). In this study, we apply this cultural fit perspective to examine how QM practices can fit organizational cultural characteristics and how the good fit produces positive outcomes.

Quality Management

As quality translates into organizational performance (for a recent review of this relationship, see Ebrahimi & Sadeghi, 2013), both research and practice have explored quality management (QM) and its impact on performance for decades. On the scholarly side, researchers have attempted to provide definitions of quality management. Among others, Snell and Dean (1992) defined QM as a management approach that is based on theoretical principles and reflected in practices. Recently, after an extensive review of the quality management literature, Zhang, Linderman, and Schroeder (2014) identified a few most well-established dimensions of QM, which include leadership, customer focus, process management, employee involvement, training, and supplier focus. Each of these dimensions has been well explored in the literature. Similarly, on the practice side, success stories associated with practices of those QM dimensions have been reported in trade journals. For example, as a specific practice of employee involvement, six sigma has been found, global wide, to be beneficial to employee
satisfaction in a series of organizational aspects including compensation, communication, work itself, relationships with co-workers, career advancement, and skill use (Sunder, 2013). Despite these success stories, failure seems to be the norm in the real world (Goldman, 2005; Foster, 2007; Zu, 2009). Alarmingly, failure rate was as high as 60-70% (Taylor & Wright, 2003), and even higher when external stakeholders such as customers and suppliers rather than the companies themselves did the evaluations (Hayes, Pisano, Upton, & Wheelwright, 2003).

Such a high rate of failure in QM practices was attributed to a misconceptualization of the QM dimensions and a blind application of them in organizational practices (Zhang et al., 2014). More specifically, the conceptualizations of the QM dimensions did not sufficiently consider the role of context in shaping practices of those dimensions (Sitkin, Sutcliffe, & Schoeder, 1994; Zhang et al., 2014). From a contingency perspective, applying a theoretical principle of QM must put contextual variation into consideration (Sousa & Voss, 2008). Consistent with the contingency perspective, culture can be examined as such a contextual variable impacting QM practices.

Organizational Culture and Quality Management

Scholarly interest in linking QM to organizational culture has been persistent for decades (Dahlgaard-Park, Chen, Jang, & Dahlgaard, 2013). The point of creating a cultural awareness of the importance of quality in an organization can be traced back to Deming, the quality control guru (Mitra, 2008). The importance of a quality culture was articulated in the 1990s (e.g., in Handfield & Ghosh, 1994), and the emphasis on it seems to be stronger today, as a significant number of recent studies examined the role of organizational culture in quality management (e.g., Canato, Ravasi, & Phillips, 2013; Davis et al., 2013; Katiliute & Neverauskas, 2009; Maurer, 2013). In this thread of literature, a number of studies argued for developing a quality culture in organizations. Establishing a culture for quality means creating a history of valuing and celebrating quality improvement and developing an organizational language for quality improvement practices (Handfield & Ghosh, 1994). A strong quality culture promotes the use of quality improvement to address emerging issues in public health agencies (Davis et al., 2013). Similarly, developing such a quality culture in a different context, i.e., higher education, is no less important and urgent (Katiliute & Neverauskas, 2009). However, overly emphasizing the importance of quality culture especially regardless of context can lead to unwanted outcomes such as unresponsiveness to technology and market development (Cole & Matsumiya, 2007). Further, this thread of literature seemed to suggest that organizational culture that favors quality management can be established in a top-down manner. Yet, organizational culture is more emergent, and developed over time, than implanted (Eisenberg & Riley, 2001), although top management can exert a huge role in the development of an organization’s culture (O’Reilly et al., 2014). Ignoring this emergent nature of organizational culture can lead to negative consequences in QM practices. For example, transplanting and imposing the Six Sigma program, a popular QM practice usually associated with a manufacturing culture, to 3M, an innovation-driven culture, produced undesirable outcomes to the company (Canato, Ravasi, & Phillips, 2013).

Besides highlighting the overall importance of organizational culture especially organizational quality culture, prior research has also investigated what benefits organizational culture can bring to QM. For example, Kuo and Kuo (2010) found that organizational culture contributes to total quality management and project performance. Similarly, Jenkins et al. (2008) found that organizational culture underlies their audit quality. Further, Naor, Goldstein, Linderman, and
Schroeder (2008) indicated that organizational culture is positively related to infrastructure quality practices, and overall performance.

However, serious concerns can be raised regarding this thread of literature. First, in some studies (e.g., Davison & Shaghana, 2007), culture and TQM practices were mixed and undifferentiated. Further, and most importantly, organizational culture was treated as an entity fitting all organizations when its effect on QM practices was investigated. For example, Kuo and Kuo (2010) adopted a conceptualization of organizational culture that divides cultures into four types, but treated it as one entity in their examination of its effect on TQM. Similarly, Naor et al. (2008) used the competing values framework to conceptualize organizational culture which introduces four different cultures, but treated them as one entire organizational culture. Even though they showed that organizational culture is positively related to infrastructure quality practices and performance, they could not specify which type of culture contributes the most, and which may not contribute, among the four, to the practices and performance. Their finding seemed to suggest that so long as organizational culture is strong (based on the measurements of the four types of cultures), it would positively contribute to QM practices and performance. This followed the same logic as prior QM conceptualization did. Just as some prior studies conceptualized QM without considering organizational context, these studies did not differentiate cultures when examining culture’s influence on QM practices. The culture-QM practice fit view requires treating organizational culture as being unique to the organization and each QM practice as fitting or misfitting the culture. In this regard, those studies failed to show whether and more importantly, how specific types of QM practices fit specific types of organizational culture. To overcome this shortcoming, this study revisits the competing values framework and discusses specific QM practices with respect to each of the four types of organizational culture.

The Competing Values Framework

In the organizational culture research literature, multiple models have been developed to conceptualize organizational culture. In this study we adopt the value conception, as cultural values have been found relevant to QM practices in organizations (Detert, Schroeder, and Mauriel, 2000). Even within the organizational culture as a value system perspective, multiple approaches have been proposed (for a comprehensive review of this thread of literature, see Gehman, Trevion & Garud, 2013). Among them, the competing values framework (CVF) has been widely used in quantitative research, as it enables researchers to examine organizational culture’s impact on other organizational behavior and performance variables such as organizational change (Denison & Spreitzer, 1991), and innovation and quality of products and services (Hartnell, Ou, & Kinicki, 2011). The competing values framework was originally developed by Quinn and his colleagues (Cameron & Quinn, 2005; Quinn, 1988; Quinn & Rohrbaugh, 1983; Quinn & Spreitzer, 1991). Basically, the CVF consists of two orientations---internal vs. external focus, and flexibility and discretion vs. stability and control. Along these two orientations, four cultures are identified: group, hierarchical, developmental, and market. Although different labels for these four cultures were used in different studies over the years, the values they refer to remain the same. In this study, we use the one adapted from Quinn and Rohrbaugh (1983) and Quinn and Spreitzer (1991). We adopt those labels for the four cultures as well as the corresponding values because they appropriately capture cultural values matching QM practices (Detert et al., 2000).

PROPOSITIONS
Spencer (1994) showed that based on the cultural model of organizations, instead of mechanistically facilitating quality management practices, organizational culture shapes organizational choices of certain TQM practices. Thus, in some cultures, their values and beliefs may favor certain TQM practices, while values and beliefs in other cultures are conducive to other TQM practices. Additionally, after extensively reviewing the organizational culture literature, Detert et al. (2000) proposed a model showing what cultural values and beliefs underlie and sustain what TQM practices. Following this view on the interaction of organizational culture and QM practices, we will review the four types of organizational culture elaborated in the CVF model and the well-established QM dimensions in the QM literature to arrive at some propositions.

The group culture is internally oriented and emphasizes flexibility and discretion. Major values highly endorsed by the group culture include cohesion, open communication, participation, and empowerment. The value of group cohesion emphasizes the importance of trust and commitment, and is also associated with values of attachment, group identification, and mutual support (Cameron & Quinn, 1988). All these values tend to cultivate positive employee morale (Cameron & Ettington, 1988). All these values are associated with the following behaviors: teamwork, participation, and involvement. Among the QM dimensions, employee involvement seems to best fit the group culture. QM practices largely depend on employee involvement (Evans & Lindsay, 2011; Kull & Narasimhan, 2010). Employee involvement is often manifested in teamwork which is needed locally within an organizational unit or function or in cross-function collaborative project completion (Dean & Bowen, 1994). As implementation of most QM initiatives and programs is accomplished by individual employees, employee involvement is critical to their success. Obviously, the group culture facilitates employee involvement.

Further, besides a high morale, enthusiasm and passion in participating in QM practices, skills and knowledge are required for employees to accomplish those practices. Employees have to go through education and training to receive the required skills and knowledge. Thus, training is an important QM dimension (Bower & Lawler, 1992; Kaynak, 2003). Training not only helps employees to acquire QM skills and knowledge, but also is an important site for enhancing their positive attitude toward QM. Success of the training programs demands collaborative attitudes from employees and their active participation. Just as it facilitates employee involvement, group culture is a positive environment for training as well. Thus, the following two propositions can be established:

**P1:** Group culture is conducive to: a) employee involvement/team work, and b) training.

**P2:** Alignment of group culture with: a) employee involvement/team work, and b) training enhances quality performance.

Similar to group culture, hierarchical culture is also internally oriented (Quinn & Kimberly, 1984), meaning the organization is more focused on what is going on within the organization. But it differs from group culture in that it emphasizes on internal control, which is often accomplished through organizational structure. The core values in hierarchical culture are control, stability, and predictability (Quinn & Kimberly, 1984). A predominant belief in hierarchical culture is that employees can be expected to accomplish their tasks as required only when their tasks are clearly defined (Hartnell, Ou, & Kinicki, 2011). Consequently, hierarchical culture highly values the following organizational goals and principles: precise communication, routinization, formalization, and consistency (Quinn & Kimberly, 1984). End results from hierarchical culture can be efficiency, timeliness, and smooth functioning (Denison & Spreitzer, 1991). The core
values of hierarchical culture are associated with such employee behaviors as conformity and predictability (Hartnell, Ou, & Kinicki, 2011).

Based on these characteristics, hierarchical culture best fits the process management dimension. Process management is to enhance the reliability and control of production and service processes, and seek continuous improvements (Sitkin et al., 1994). This dimension involves data collection, use of statistics to analyze the data, and decision making based on the analysis results. Process management usually includes process analysis, statistical process control, reengineering, problem-solving, and planning/checking/acting. It is technical in nature and usually monitored and implemented by technical staff such as quality management professionals. Compared to other QM practices such as employee initiatives, quality circles, etc, process management requires less extensive participation and involvement from ordinary employees. But when it involves employee involvement for certain activities, training can be performed to accomplish those objectives. Training for process management is highly technical and aims to achieve predictability and control. Overall, process management and related training seek to reduce variation and ensure good reliability and predictability for work processes. These attributes of process management match with organizational goals of precise communication, routinization, formalization, and consistency that hierarchical culture is good at promoting. Thus, the following two propositions can be articulated:

**P3: Hierarchical culture facilitates: a) process management, and b) training.**

**P4: Alignment of hierarchical culture with: a) process management, and b) training enhances quality performance.**

The developmental culture is characterized by an external orientation as well as a flexible organizational structure (Hartnell et al., 2011). It values change and resource development. External resources are particularly desirable for developmental organizations. They treat stakeholders such as supplies as important sources of external resources. A fundamental belief inherent in the developmental culture is that an idealistic vision is powerful in organizational identification by both internal employees but more importantly, external parties such as suppliers. Associated with their idealism is a much valued external expansion, which builds on trust. Developmental culture organizations tend to develop relationships with external parties based on mutual trust. With such an external enterprise, risk-taking, innovation, and creativity are encouraged (Denison & Spreitzer, 1991). For organizational goals, a developmental culture emphasizes growth, stimulation, diversity, autonomy, and attention to detail (Quinn & Kimberly, 1984).

Those characteristics of the developmental culture make it a good fit for the supplier involvement QM practices. Supplier involvement is usually needed in product development, an activity with high potential for innovation (Ansari & Modarress, 1994; Ragatz et al., 1997; Wynstra & Pierick, 2000). The cultural inclination for innovation should be a motivator for organizations with a developmental culture to seek supplier involvement. Supplier involvement helps to improve quality, because frequent early interaction and integrated problem-solving with the focal firm can improve component design quality (Takeishi, 2001), communication with representatives from focal firms makes suppliers know more about component design requirements (Carr, Kaynak, Hartley, & Ross, 2008), and thus increase their technological capabilities, which contributes to waste reduction, enhancement of the quality of their products (Chung & Kim, 2003). External communication and integration required in supplier involvement is compatible with the developmental culture, as it is mostly externally oriented. Supplier
involvement involves multiple practices including providing performance feedback, conducting audits, sharing information, conducting training, and directly changing a supplier’s operations (Humphreys et al., 2004; Krause, 1997; Krause et al., 1998, 2000; Modi & Mabert, 2007; Petroni & Panciroli, 2002; Prahinski & Benton, 2004; Wagner, 2006). Supplier involvement in product development entails mutual trust between the focal firm and the suppliers (Krause, 1997; Krause et al., 1998), and outsourcing responsibility to the suppliers for quality management of the outsourced parts (Ro, Liker, & Fixson, 2008). These requirements match closely with the characteristics of the developmental culture. Thus, we provide the following two propositions:

\[ P5: \text{Developmental culture facilitates supplier involvement.} \]
\[ P6: \text{Alignment of developmental culture with supplier involvement enhances quality performance.} \]

Similar to developmental culture, market culture is also externally oriented, but it prefers an organizational structure that exerts control. Market culture focuses on achievement and values competitiveness and aggressiveness (Hartnell et al., 2011). Unlike developmental culture that invests in relationship development with external parties aiming at long-term goals, market culture interacts with external parties mainly for meeting short-term objectives such as sales. The achievement focus also results in productivity and shareholder value in the short and immediate return (Cameron & Quinn, 1999). A primary belief in market culture is that clearly defined goals and contingent based rewarding mechanisms can motivate internal employees to produce products or service that meet customers’ expectations (Hartnell et al., 2011). Thus, increased market share, profit, and productivity are primary goals for a market culture. For a market culture, meeting customers’ expectations so that they are competitive enough in the market is also a powerful motivator for continuous improvement in product/service quality (Cameron et al., 2006).

Given the instrumentality of meeting customer expectations in its value and belief system, market culture should favor customer focus in its QM practices. Customer focus is critical to QM for organizations (Dean & Bowen, 1994; Escrig-Tena & Bou-Liusar, 2005). Practices associated with customer focus in QM usually include identifying customer needs or expectations, translating them into product or service design, and assessing the quality of their products or services using customer needs and expectations as criteria (Lengnick-Hall, 1996). Although firms need to explore future needs of customers (Zhang et al., 2014), they communicate with current customers mostly about meeting their current needs. Thus, customer focus QM practices are short-term in nature. The volatility of the market adds to their realistic approach towards customers, i.e., meeting their current needs. Integrating the characteristics of the market culture and attributes of customer focus QM, the following two propositions can be established:

\[ P7: \text{Market culture facilitates customer involvement.} \]
\[ P8: \text{Alignment of market culture with customer involvement enhances quality performance.} \]

CONCLUSION

Over the years, a variety of QM practices have been developed in quality control research and practice. Discussion of the pros and cons of these QM practices should be tied to the
organizational context. This paper articulates the need to address one dimension of the organizational context, organizational culture, when assessing effectiveness of QM practices. Applying the cultural fit perspective to QM, this paper has examined the literatures on QM practices and organizational culture, especially the competing values framework of organizational culture, and presents eight propositions regarding how QM practices should fit organizational cultural characteristics. These propositions can have important implications for both theory and practice. For future research, empirical studies can further investigate how individual QM practices should fit the cultural characteristics in the organizations where they are used and whether such a cultural fit for QM practices will lead to positive outcomes. For practice, managers can do an organizational culture assessment of their organization before they put a specific QM practice in use. The assessment result together with their knowledge of the QM practice can inform them as to whether the QM practice fits their culture. This way, managers can hope to achieve optimal results in their general quality management practices. In large organizations, multiple subcultures may exist across different units. Instead of adopting organization-wide QM practices, managers can encourage each unit to adopt a QM practice that fits their unit culturally. For example, in R&D, as their culture is more developmental and group, customer-oriented QM practices and participation methods may yield satisfactory results.

REFERENCES


